BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

ADAMS County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
46	46.859	50.940	LINCOLN County, Washington	EAST KEYSTONE, WA	M0	East	27.2208	4.081	140,421
						West	66.9875	4.081	345,561
	50.940	52.740	EAST KEYSTONE, WA	WEST KEYSTONE, WA	M0	East	27.2124	1.800	61,909
						West	66.9799	1.800	152,381
	52.740	57.808	WEST KEYSTONE, WA	EAST TOKIO, WA	M0	East	27.1733	5.068	174,057
						West	66.9329	5.068	428,736
	57.808	59.493	EAST TOKIO, WA	WEST TOKIO, WA	M0	East	27.0590	1.685	57,627
						West	66.7954	1.685	142,253
	59.493	68.300	WEST TOKIO, WA	EAST ESSIG, WA	M0	East	27.1529	8.807	302,244
						West	67.1646	8.807	747,622
	68.300	70.300	EAST ESSIG, WA	WEST ESSIG, WA	M0	East	27.2170	2.000	68,799
						West	67.3861	2.000	170,339
	70.300	72.527	WEST ESSIG, WA	EAST PAHA, WA	M0	East	27.2170	2.227	76,608
						West	67.3861	2.227	189,672
	72.527	74.214	EAST PAHA, WA	WEST PAHA, WA	M0	East	27.2171	1.687	58,032
						West	67.3856	1.687	143,680
	74.214	84.907	WEST PAHA, WA	SAND, WA	M0	East	27.2173	10.693	367,839
						West	67.3657	10.693	910,442
	84.907	90.760	SAND, WA	BEATRICE, WA	M1	East	13.6032	5.853	100,631
						West	33.6763	5.853	249,125
	84.907	90.760	SAND, WA	BEATRICE, WA	M2	East	13.6032	5.853	100,631
						West	33.6763	5.853	249,125
	90.760	99.448	BEATRICE, WA	CUNNINGHAM, WA	M1	East	13.6023	8.688	149,364
						West	33.6747	8.688	369,775
	90.760	99.448	BEATRICE, WA	CUNNINGHAM, WA	M2	East	13.6023	8.688	149,364
						West	33.6747	8.688	369,775
	99.448	104.367	CUNNINGHAM, WA	FRANKLIN County, Washington	M0	East	27.1986	4.919	169,099
						West	67.3364	4.919	418,644

ADAMS County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	72.61	9.6	0.00	72.61
Carbon Monoxide	27.4	207.25	27.4	0.00	207.25
Nitrogen Oxides	172.5	1304.77	172.5	0.00	1304.77
Particulates	6	45.38	6	0.00	45.38
Sulfur Dioxide	16.3	123.29	16.3	0.00	123.29

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

BENTON County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
47	164.882	169.258	KLICKITAT County, Washington	EAST MCCREDIE, WA	M0	East	23.6783	4.376	130,956
						West	61.1331	4.376	338,104
	169.258	171.124	EAST WHITCOMB, WA	WEST WHITCOMB, WA	M0	East	23.6736	1.866	55,833
						West	61.1249	1.866	144,160
	171.124	179.069	WEST PATERSON, WA	EAST WHITCOMB, WA	M0	East	23.6662	7.945	237,649
						West	61.1122	7.945	613,671
	179.069	180.543	EAST PATERSON, WA	WEST PATERSON, WA	M0	East	23.6662	1.474	44,090
						West	61.1050	1.474	113,838
	180.543	190.884	WEST PLYMOUTH, WA	EAST PATERSON, WA	M0	East	23.6662	10.341	309,318
						West	61.0981	10.341	798,553
	190.884	192.767	EAST PLYMOUTH, WA	WEST PLYMOUTH, WA	M0	East	23.6904	1.883	56,381
						West	61.1882	1.883	145,624
	192.767	202.514	WEST BERRIAN, WA	EAST PLYMOUTH, WA	M0	East	23.7258	9.747	292,284
						West	61.3195	9.747	755,411
	202.514	203.957	EAST BERRIAN, WA	WEST BERRIAN, WA	M0	East	23.7259	1.443	43,272
						West	61.3195	1.443	111,835
	203.957	215.077	WEST YELLEPIT, WA	EAST BERRIAN, WA	M0	East	23.7261	11.120	333,461
						West	61.3196	11.120	861,822
	215.077	216.983	EAST YELLEPIT, WA	WEST YELLEPIT, WA	M0	East	23.7275	1.906	57,160
						West	61.3316	1.906	147,748
	216.983	227.661	WEST HOVER, WA	EAST YELLEPIT, WA	M0	East	23.8375	10.678	321,710
						West	61.4665	10.678	829,549
	227.661	229.280	EAST HOVER, WA	WEST HOVER, WA	M0	East	24.0394	1.619	49,191
						West	61.6845	1.619	126,222
	229.280	229.666	SP&S JCT, WA	END SUB, WA	M0	East	24.0410	0.386	11,729
						West	61.6666	0.386	30,085
48	1.881	7.130	EAST KENNEWICK, WA	EAST VISTA, WA	M0	East	4.8842	5.249	32,403
						West	7.1538	5.249	47,460
	7.130	16.800	EAST VISTA, WA	BADGER, WA	M0	East	4.8786	9.670	59,626
						West	7.1445	9.670	87,320
	16.800	22.260	BADGER, WA	EAST KIONA, WA	M0	East	4.8771	5.460	33,656
						West	7.1436	5.460	49,297

22.260	24.030	EAST KIONA, WA	WEST KIONA, WA	M0	East	4.8770	1.770	10,910
					West	7.1436	1.770	15,981
24.030	33.520	WEST KIONA, WA	EAST GIBBON, WA	M0	East	4.8781	9.490	58,510
					West	7.1442	9.490	85,691
33.520	40.480	EAST GIBBON, WA	EAST PROSSER, WA	M0	East	4.6486	6.960	40,893
					West	6.7620	6.960	59,484
40.480	41.310	EAST PROSSER, WA	WEST BYRON, WA	M0	East	4.6491	0.830	4,877
					West	6.6672	0.830	6,994
41.310	44.210	WEST BYRON, WA	EAST BYRON, WA	M0	East	4.6495	2.900	17,042
					West	6.6667	2.900	24,436
44.210	45.427	EAST BYRON, WA	YAKIMA County, Washington	M0	East	4.3801	1.217	6,737
					West	6.3921	1.217	9,832

BENTON County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **7,610,805**

Estimated 2008 Main Line Mileage **108.3**

BENTON County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	80.52	9.6	0.00	80.52
Carbon Monoxide	27.4	229.81	27.4	0.00	229.81
Nitrogen Oxides	172.5	1446.78	172.5	0.00	1446.78
Particulates	6	50.32	6	0.00	50.32
Sulfur Dioxide	16.3	136.71	16.3	0.00	136.71

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

CHELAN County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
37	1641.091	1642.736	DOUGLAS County, Washington	EAST MALAGA, WA	M0	East	14.9416	1.645	31,071
						West	12.9168	1.645	26,860
	1642.736	1644.610	EAST MALAGA, WA	WEST MALAGA, WA	M0	East	14.9443	1.874	35,396
						West	12.9169	1.874	30,594
	1644.610	1650.199	WEST MALAGA, WA	END SUB, WA	M0	East	14.9457	5.589	105,576
						West	12.9170	5.589	91,245
	1650.199	1650.200	BEGIN SUB, WA	WENATCHEE, WA	M0	East	14.9457	0.001	19
						West	12.9170	0.001	16
	1650.200	1652.825	WENATCHEE, WA	OLDS JCT, WA	M1	East	7.5439	2.625	25,029
						West	6.7498	2.625	22,394
	1650.200	1652.825	WENATCHEE, WA	OLDS JCT, WA	M2	East	7.5439	2.625	25,029
						West	6.7498	2.625	22,394
	1652.825	1659.305	OLDS JCT, WA	EAST CASHMERE, WA	M0	East	15.0878	6.480	123,570
						West	13.4996	6.480	110,563
	1659.305	1661.179	EAST CASHMERE, WA	WEST CASHMERE, WA	M0	East	15.0878	1.874	35,736
						West	13.4996	1.874	31,975
	1661.179	1671.358	WEST CASHMERE, WA	EAST LEAVENWORTH, WA	M0	East	15.0846	10.179	194,067
						West	13.5001	10.179	173,682
	1671.358	1673.002	EAST LEAVENWORTH, WA	WEST LEAVENWORTH, WA	M0	East	15.0850	1.644	31,344
						West	13.4999	1.644	28,051
	1673.002	1685.754	WEST LEAVENWORTH, WA	EAST WINTON, WA	M0	East	15.0857	12.752	243,141
						West	13.4994	12.752	217,574
	1685.754	1687.976	EAST WINTON, WA	WEST WINTON, WA	M0	East	15.0884	2.222	42,374
						West	13.4998	2.222	37,913
	1687.976	1691.717	WEST WINTON, WA	EAST MERRITT, WA	M0	East	15.0886	3.741	71,343
						West	13.4999	3.741	63,831
	1691.717	1693.134	EAST MERRITT, WA	WEST MERRITT, WA	M0	East	14.8595	1.417	26,613
						West	13.2733	1.417	23,772
	1693.134	1697.308	WEST MERRITT, WA	EAST BERNE, WA	M0	East	14.6340	4.174	77,202
						West	13.0502	4.174	68,847
	1697.308	1699.561	EAST BERNE, WA	WEST BERNE, WA	M0	East	14.6340	2.253	41,671
						West	13.0504	2.253	37,162
	1699.561	1704.631	WEST BERNE, WA	KING County, Washington	M0	East	14.6343	5.070	93,778
						West	13.0552	5.070	83,659

CHELAN County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **2,273,491**

Estimated 2008 Main Line Mileage **63.5**

CHELAN County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 1		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	24.05	9.6	0.53	24.58
Carbon Monoxide	27.4	68.65	27.4	1.51	70.16
Nitrogen Oxides	172.5	432.18	172.5	9.50	441.68
Particulates	6	15.03	6	0.33	15.36
Sulfur Dioxide	16.3	40.84	16.3	0.90	41.74

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

CLARK County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
47	9.598	9.817	MULTNOMAH County, Oregon	OREGON SLOUGH, OR	M1	East	5.2892	0.219	1,463
						West	8.2399	0.219	2,279
	9.598	9.817	MULTNOMAH County, Oregon	OREGON SLOUGH, OR	M2	East	5.2892	0.219	1,463
						West	8.2399	0.219	2,279
	9.817	10.710	8TH STREET, OR	COLUMBIA RIVER BRIDGE, OR	M1	East	12.9131	0.893	14,575
						West	27.6225	0.893	31,177
	9.817	10.710	8TH STREET, OR	COLUMBIA RIVER BRIDGE, OR	M2	East	12.9131	0.893	14,575
						West	27.6225	0.893	31,177
	10.710	12.660	EAVAN, OR	8TH STREET, OR	M1	East	14.0181	1.950	34,549
						West	30.4297	1.950	74,997
	10.710	12.660	EAVAN, OR	8TH STREET, OR	M2	East	14.0181	1.950	34,549
						West	30.4297	1.950	74,997
	12.660	14.894	MCLOUGHLIN, OR	EAVAN, OR	M1	East	14.0325	2.234	39,622
						West	30.4247	2.234	85,906
	12.660	14.894	MCLOUGHLIN, OR	EAVAN, OR	M2	East	14.0325	2.234	39,622
						West	30.4247	2.234	85,906
	14.894	23.000	MP 23.0, WA	MCLOUGHLIN, WA	M0	East	28.1052	8.106	287,943
						West	60.8428	8.106	623,346
	23.000	27.738	WEST WASHOUGAL, WA	MP 23.0, WA	M0	East	28.0981	4.738	168,262
						West	60.8493	4.738	364,388
	27.738	29.847	EAST WASHOUGAL, WA	WEST WASHOUGAL, WA	M0	East	28.0563	2.109	74,786
						West	60.8473	2.109	162,193
	29.847	32.217	WEST SKAMANIA, WA	SKAMANIA County, Washington	M0	East	28.0317	2.370	83,962
						West	60.8037	2.370	182,123
52	119.179	123.673	COWLITZ County, Washington	RIDGEFIELD S, WA	M1	East	11.7745	4.494	66,885
						West	22.9506	4.494	130,371
	119.179	123.673	COWLITZ County, Washington	RIDGEFIELD S, WA	M2	East	11.7745	4.494	66,885
						West	22.9506	4.494	130,371
	123.673	130.674	RIDGEFIELD S, WA	FELIDA, WA	M1	East	11.4713	7.001	101,505
						West	22.6754	7.001	200,645
	123.673	130.674	RIDGEFIELD S, WA	FELIDA, WA	M2	East	11.4713	7.001	101,505
						West	22.6754	7.001	200,645

130.674	132.488	FELIDA, WA	VANCOUVER JCT NORTH, WA	M1	East	11.4713	1.814	26,300
					West	22.6754	1.814	51,988
130.674	132.488	FELIDA, WA	VANCOUVER JCT NORTH, WA	M2	East	11.4713	1.814	26,300
					West	22.6754	1.814	51,988
132.488	136.251	VANCOUVER JCT NORTH, WA	END STATE, WA	M1	East	12.2102	3.763	58,073
					West	23.4052	3.763	111,317
132.488	133.631	VANCOUVER JCT NORTH, WA	B YARD VANJCT, WA	M2	East	11.7958	1.143	17,041
					West	22.9905	1.143	33,213
133.631	136.251	B YARD VANJCT, WA	END STATE, WA	M2	East	12.3815	2.620	41,000
					West	23.5766	2.620	78,072

CLARK County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **4,010,242**

Estimated 2008 Main Line Mileage **43.5**

CLARK County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 8		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	42.43	9.6	4.23	46.66
Carbon Monoxide	27.4	121.09	27.4	12.08	133.17
Nitrogen Oxides	172.5	762.33	172.5	76.04	838.36
Particulates	6	26.52	6	2.64	29.16
Sulfur Dioxide	16.3	72.03	16.3	7.19	79.22

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

COWLITZ County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
52	79.006	85.004	LEWIS County, Washington	MP 85, WA	M1	East	10.3190	5.998	78,224
						West	17.3967	5.998	131,877
	79.006	85.004	LEWIS County, Washington	MP 85, WA	M2	East	10.3190	5.998	78,224
						West	17.3967	5.998	131,877
	85.004	93.398	MP 85, WA	OSTRANDER, WA	M1	East	10.3163	8.394	109,448
						West	17.3958	8.394	184,556
	85.004	93.398	MP 85, WA	OSTRANDER, WA	M2	East	10.3163	8.394	109,448
						West	17.3958	8.394	184,556
	93.398	98.930	OSTRANDER, WA	KELSO SOUTH, WA	M1	East	10.4782	5.532	73,263
						West	17.5545	5.532	122,740
	93.398	98.930	OSTRANDER, WA	KELSO SOUTH, WA	M2	East	10.4782	5.532	73,263
						West	17.5545	5.532	122,740
	98.930	102.535	KELSO SOUTH, WA	LONGVIEW JCT S, WA	M1	East	10.9759	3.605	50,010
						West	18.2878	3.605	83,326
	98.930	102.535	KELSO SOUTH, WA	LONGVIEW JCT S, WA	M2	East	10.9759	3.605	50,010
						West	18.2878	3.605	83,326
	102.535	110.788	LONGVIEW JCT S, WA	MP 111, WA	M1	East	11.4919	8.253	119,872
						West	20.4034	8.253	212,828
	102.535	110.788	LONGVIEW JCT S, WA	MP 111, WA	M2	East	11.4919	8.253	119,872
						West	20.4034	8.253	212,828
	110.788	116.578	MP 111, WA	WOODLAND, WA	M1	East	11.9283	5.790	87,291
						West	23.0417	5.790	168,619
	110.788	116.578	MP 111, WA	WOODLAND, WA	M2	East	11.9283	5.790	87,291
						West	23.0417	5.790	168,619
	116.578	119.179	WOODLAND, WA	CLARK County, Washington	M1	East	11.7745	2.601	38,702
						West	22.9506	2.601	75,436
	116.578	119.179	WOODLAND, WA	CLARK County, Washington	M2	East	11.7745	2.601	38,702
						West	22.9506	2.601	75,436

COWLITZ County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **3,072,381**

Estimated 2008 Main Line Mileage **40.2**

COWLITZ County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 3		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	32.50	9.6	1.59	34.09
Carbon Monoxide	27.4	92.77	27.4	4.53	97.30
Nitrogen Oxides	172.5	584.04	172.5	28.51	612.56
Particulates	6	20.31	6	0.99	21.31
Sulfur Dioxide	16.3	55.19	16.3	2.69	57.88

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

DOUGLAS County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
37	1626.836	1627.046	GRANT County, Washington	WEST TRINIDAD, WA	M0	East	14.9396	0.210	3,961
						West	12.9216	0.210	3,426
	1627.046	1634.140	WEST TRINIDAD, WA	EAST ALBUS, WA	M0	East	14.9393	7.094	133,948
						West	12.9218	7.094	115,859
	1634.140	1635.874	EAST ALBUS, WA	WEST ALBUS, WA	M0	East	14.9414	1.734	32,746
						West	12.9173	1.734	28,310
	1635.874	1641.091	WEST ALBUS, WA	CHELAN County, Washington	M0	East	14.9416	5.217	98,516
						West	12.9168	5.217	85,166

DOUGLAS County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **501,930**

Estimated 2008 Main Line Mileage **14.3**

DOUGLAS County

2008 Estimation of BNSF Locomotive Emissions

POLLUTANT	LINE HAUL LOCOMOTIVES EPA Emission Factor g/gal	LINE HAUL LOCOMOTIVES Emissions in Tons/Year	YARD LOCOMOTIVES* 6 EPA Emission Factor g/gal	YARD LOCOMOTIVES* 6 Emissions in Tons/Year	**TOTAL Emissions in Tons/Year**
Hydrocarbon	9.6	5.31	9.6	3.17	8.48
Carbon Monoxide	27.4	15.16	27.4	9.06	24.21
Nitrogen Oxides	172.5	95.41	172.5	57.03	152.44
Particulates	6	3.32	6	1.98	5.30
Sulfur Dioxide	16.3	9.02	16.3	5.39	14.40

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

FERRY County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
377	4.759	8.442	STEVENS County, Washington	STEVENS County, Washington	M1	East	0.0000	3.684	0
						West	0.0000	3.684	0

FERRY County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **0**

Estimated 2008 Main Line Mileage **3.7**

FERRY County

2008 Estimation of BNSF Locomotive Emissions

POLLUTANT	LINE HAUL LOCOMOTIVES EPA Emission Factor g/gal	LINE HAUL LOCOMOTIVES Emissions in Tons/Year	YARD LOCOMOTIVES* 0 EPA Emission Factor g/gal	YARD LOCOMOTIVES* 0 Emissions in Tons/Year	**TOTAL Emissions in Tons/Year**
Hydrocarbon	9.6	0.00	9.6	0.00	0.00
Carbon Monoxide	27.4	0.00	27.4	0.00	0.00
Nitrogen Oxides	172.5	0.00	172.5	0.00	0.00
Particulates	6	0.00	6	0.00	0.00
Sulfur Dioxide	16.3	0.00	16.3	0.00	0.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

FRANKLIN County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
46	104.367	108.251	ADAMS County, Washington	EAST CONNELL, WA	M0	East	27.1986	3.884	133,516
						West	67.3364	3.884	330,550
	108.251	109.937	EAST CONNELL, WA	WEST CONNELL, WA	M0	East	27.1986	1.686	57,959
						West	67.3364	1.686	143,490
	109.937	114.948	WEST CONNELL, WA	EAST CACTUS, WA	M0	East	28.1323	5.011	178,174
						West	68.2115	5.011	432,012
	114.948	116.633	EAST CACTUS, WA	WEST CACTUS, WA	M0	East	28.1552	1.685	59,961
						West	68.2232	1.685	145,293
	116.633	126.391	WEST CACTUS, WA	EAST ELTOPIA, WA	M0	East	28.1607	9.758	347,311
						West	68.2216	9.758	841,388
	126.391	128.076	EAST ELTOPIA, WA	WEST ELTOPIA, WA	M0	East	28.1632	1.685	59,979
						West	68.2225	1.685	145,292
	128.076	137.015	WEST ELTOPIA, WA	GLADE, WA	M0	East	28.1512	8.939	318,053
						West	68.2198	8.939	770,749
	137.020	140.300	GLADE, WA	PASCO EAST, WA	M1	East	14.1124	3.280	58,504
						West	34.0985	3.280	141,359
	137.020	140.300	GLADE, WA	PASCO EAST, WA	M2	East	14.1124	3.280	58,504
						West	34.0985	3.280	141,359
	140.300	142.100	PASCO EAST, WA	COUGAR, WA	M1	East	14.1124	1.800	32,106
						West	34.0985	1.800	77,575
	140.300	142.100	PASCO EAST, WA	COUGAR, WA	M2	East	14.1124	1.800	32,106
						West	34.0985	1.800	77,575
	142.100	142.700	COUGAR, WA	HUSKY, WA	M1	East	14.1124	0.600	10,702
						West	34.0985	0.600	25,858
	142.100	142.700	COUGAR, WA	HUSKY, WA	M2	East	14.1124	0.600	10,702
						West	34.0985	0.600	25,858
	142.700	145.302	HUSKY, WA	GRAPEVINE, WA	M1	East	14.1124	2.602	46,411
						West	34.0985	2.602	112,139
	142.700	145.302	HUSKY, WA	GRAPEVINE, WA	M2	East	14.1124	2.602	46,411
						West	34.0985	2.602	112,139
	145.302	146.597	GRAPEVINE, WA	CP 146.59, WA	M1	East	14.1124	1.295	23,099
						West	34.0985	1.295	55,811
	145.302	146.597	GRAPEVINE, WA	CP 146.59, WA	M2	East	14.1124	1.295	23,099
						West	34.0985	1.295	55,811

FRANKLIN County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **5,130,854**

Estimated 2008 Main Line Mileage **42.2**

FRANKLIN County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 18		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	54.28	9.6	9.52	63.80
Carbon Monoxide	27.4	154.93	27.4	27.18	182.10
Nitrogen Oxides	172.5	975.35	172.5	171.09	1146.44
Particulates	6	33.93	6	5.95	39.88
Sulfur Dioxide	16.3	92.16	16.3	16.17	108.33

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

GRANT County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
37	1568.952	1576.070	LINCOLN County, Washington	EAST WILSON CREEK, WA	M0	East	14.3047	7.118	128,687
						West	12.3869	7.118	111,434
	1576.070	1577.890	EAST WILSON CREEK, WA	WEST WILSON CREEK, WA	M0	East	14.3957	1.820	33,114
						West	12.4802	1.820	28,708
	1577.890	1587.732	WEST WILSON CREEK, WA	EAST ADRIAN, WA	M0	East	14.3972	9.842	179,092
						West	12.4818	9.842	155,265
	1587.732	1589.900	EAST ADRIAN, WA	WEST ADRIAN, WA	M0	East	14.3983	2.168	39,453
						West	12.4833	2.168	34,206
	1589.900	1602.785	WEST ADRIAN, WA	EAST NAYLOR, WA	M0	East	14.8171	12.885	241,302
						West	12.7694	12.885	207,955
	1602.785	1604.854	EAST NAYLOR, WA	WEST NAYLOR, WA	M0	East	14.8952	2.069	38,951
						West	12.8280	2.069	33,545
	1604.854	1614.350	WEST NAYLOR, WA	MP 1614.1, WA	M0	East	14.8952	9.496	178,773
						West	12.8258	9.496	153,936
	1614.350	1614.562	MP 1614.1, WA	EAST QUINCY, WA	M0	East	14.8953	0.212	3,991
						West	12.8259	0.212	3,437
	1614.562	1618.894	EAST QUINCY, WA	WEST QUINCY, WA	M0	East	14.9306	4.332	81,748
						West	12.9015	4.332	70,639
	1618.894	1625.507	WEST QUINCY, WA	EAST TRINIDAD, WA	M0	East	14.9400	6.613	124,871
						West	12.9216	6.613	108,001
	1625.507	1626.836	EAST TRINIDAD, WA	DOUGLAS County, Washington	M0	East	14.9396	1.329	25,099
						West	12.9216	1.329	21,709

GRANT County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **2,003,917**

Estimated 2008 Main Line Mileage **57.9**

GRANT County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 0		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	21.20	9.6	0.00	21.20
Carbon Monoxide	27.4	60.51	27.4	0.00	60.51
Nitrogen Oxides	172.5	380.93	172.5	0.00	380.93
Particulates	6	13.25	6	0.00	13.25
Sulfur Dioxide	16.3	36.00	16.3	0.00	36.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

GRAYS County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons

GRAYS County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **0**

Estimated 2008 Main Line Mileage **0.0**

GRAYS HARBOR County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	0.00	9.6	0.00	0.00
Carbon Monoxide	27.4	0.00	27.4	0.00	0.00
Nitrogen Oxides	172.5	0.00	172.5	0.00	0.00
Particulates	6	0.00	6	0.00	0.00
Sulfur Dioxide	16.3	0.00	16.3	0.00	0.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

KING County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
37	1704.631	1708.323	CHELAN County, Washington	EAST SCENIC, WA	M0	East	14.6343	3.692	68,287
						West	13.0552	3.692	60,919
	1708.323	1721.184	EAST SCENIC, WA	WEST SCENIC, WA	M0	East	14.6312	12.861	237,831
						West	13.0534	12.861	212,184
	1721.184	1730.709	WEST SCENIC, WA	EAST SKYKOMISH, WA	M0	East	14.6309	9.525	176,137
						West	13.0532	9.525	157,143
	1730.709	1732.529	EAST SKYKOMISH, WA	WEST SKYKOMISH, WA	M0	East	14.6481	1.820	33,695
						West	13.0776	1.820	30,082
	1732.529	1738.511	WEST SKYKOMISH, WA	EAST BARING, WA	M0	East	14.7398	5.982	111,443
						West	13.2072	5.982	99,855
	1738.511	1740.317	EAST BARING, WA	SNOHOMISH County, Washington	M0	East	14.7398	1.806	33,639
						West	13.2073	1.806	30,142
49	47.529	48.840	KITTITAS County, Washington	EAST STAMPEDE, WA	M0	East	3.7837	1.311	6,268
						West	5.6455	1.311	9,352
	48.840	49.160	EAST STAMPEDE, WA	WEST STAMPEDE, WA	M0	East	3.7837	0.320	1,530
						West	5.6455	0.320	2,283
	49.160	59.040	WEST STAMPEDE, WA	EAST LESTER, WA	M0	East	3.7825	9.880	47,233
						West	5.6455	9.880	70,497
	59.040	60.510	EAST LESTER, WA	WEST LESTER, WA	M0	East	3.7794	1.470	7,022
						West	5.6388	1.470	10,477
	60.510	81.060	WEST LESTER, WA	PALMER JCT, WA	M0	East	3.7771	20.550	98,103
						West	5.6339	20.550	146,330
	81.060	81.940	PALMER JCT, WA	EAST KANASKAT, WA	M0	East	3.7788	0.880	4,203
						West	5.6339	0.880	6,266
	81.940	83.860	EAST KANASKAT, WA	WEST KANASKAT, WA	M0	East	3.7726	1.920	9,155
						West	5.6335	1.920	13,671
	83.860	87.530	WEST KANASKAT, WA	EAST RAVENSDALE, WA	M0	East	3.7711	3.670	17,492
						West	5.6335	3.670	26,131
	87.530	88.820	EAST RAVENSDALE, WA	WEST RAVENSDALE, WA	M0	East	3.7656	1.290	6,140
						West	5.6262	1.290	9,173
	88.820	93.790	WEST RAVENSDALE, WA	EAST COVINGTON, WA	M0	East	3.7630	4.970	23,638
						West	5.6228	4.970	35,320

	93.790	95.060	EAST COVINGTON, WA	WEST COVINGTON, WA	M0	East	3.7630	1.270	6,040
						West	5.6228	1.270	9,025
	95.060	100.600	WEST COVINGTON, WA	MP 100.6, WA	M0	East	3.7630	5.540	26,349
						West	5.6230	5.540	39,372
	100.600	101.290	MP 100.6, WA	EAST EAST AUBURN, WA	M0	East	3.7630	0.690	3,282
						West	5.6230	0.690	4,904
	101.290	102.290	EAST EAST AUBURN, WA	WEST EAST AUBURN, WA	M0	East	3.7630	1.000	4,756
						West	5.6230	1.000	7,107
	102.290	102.855	WEST EAST AUBURN, WA	END STATE, WA	M0	East	3.7630	0.565	2,687
						West	5.6230	0.565	4,015
50	0.145	1.665	NORTH PORTAL, WA	SOUTH PORTAL, WA	M1	East	15.4543	1.520	29,690
						West	13.9793	1.520	26,856
	0.145	1.665	NORTH PORTAL, WA	SOUTH PORTAL, WA	M2	East	15.4543	1.520	29,690
						West	13.9793	1.520	26,856
	1.665	3.420	GALER STREET, WA	NORTH PORTAL, WA	M1	East	15.4543	1.755	34,280
						West	13.9793	1.755	31,008
	1.665	3.420	GALER STREET, WA	NORTH PORTAL, WA	M2	East	15.4543	1.755	34,280
						West	13.9793	1.755	31,008
	3.420	4.341	MP 4, WA	GALER STREET, WA	M0	East	30.9086	0.921	35,979
						West	27.9586	0.921	32,545
	4.341	5.000	23RD ST, WA	MP 4, WA	M0	East	30.1053	0.659	25,075
						West	27.6554	0.659	23,035
	5.000	5.415	MP 5.4, WA	23RD ST, WA	M0	East	22.0864	0.415	11,585
						West	24.6290	0.415	12,918
	5.415	7.389	MP 7, WA	MP 5.4, WA	M1	East	11.0424	1.974	27,550
						West	12.3143	1.974	30,723
	5.415	7.389	MP 7, WA	MP 5.4, WA	M2	East	11.0424	1.974	27,550
						West	12.3143	1.974	30,723
	7.389	7.727	MP 8, WA	MP 7, WA	M0	East	22.0541	0.338	9,421
						West	24.6215	0.338	10,518
	7.727	9.100	BLUE RIDGE, WA	MP 8, WA	M1	East	11.0270	1.373	19,136
						West	12.3107	1.373	21,363
	7.727	9.100	BLUE RIDGE, WA	MP 8, WA	M2	East	11.0270	1.373	19,136
						West	12.3107	1.373	21,363
	9.100	15.007	MP 16, WA	SNOHOMISH County, Washington	M1	East	11.0337	5.907	82,382
						West	12.3223	5.907	92,003
	9.100	15.007	MP 16, WA	SNOHOMISH County, Washington	M2	East	11.0337	5.907	82,382
						West	12.3223	5.907	92,003
51	0.000	2.070	SEATTLE, WA	SPOKANE STREET, WA	M1	East	14.0496	2.070	36,758
						West	15.6127	2.070	40,847

0.000	2.070	SEATTLE, WA	SPOKANE STREET, WA	M2	East	14.0496	2.070	36,758
					West	15.6127	2.070	40,847
2.070	3.200	SPOKANE STREET, WA	LUCILE, WA	M1	East	14.0385	1.130	20,050
					West	15.5989	1.130	22,279
2.070	3.430	SPOKANE STREET, WA	ARGO, WA	M2	East	13.7032	1.360	23,555
					West	15.2008	1.360	26,129
3.200	3.390	LUCILE, WA	ARGO, WA	M1	East	12.7977	0.190	3,073
					West	14.0602	0.190	3,376
3.390	3.630	ARGO, WA	BAILEY, WA	M1	East	8.5318	0.240	2,588
					West	9.3735	0.240	2,843
3.430	3.630	ARGO, WA	BAILEY, WA	M2	East	8.5318	0.200	2,157
					West	9.3735	0.200	2,369
3.630	4.200	BAILEY, WA	GEORGETOWN, WA	M1	East	8.5318	0.570	6,147
					West	9.3735	0.570	6,753
3.630	6.310	BAILEY, WA	RHODES, WA	M2	East	8.5318	2.680	28,899
					West	9.3735	2.680	31,750
3.630	5.400	BAILEY, WA	VAN ASSELT, WA	M3	East	8.5318	1.770	19,087
					West	9.3735	1.770	20,970
4.200	6.310	GEORGETOWN, WA	RHODES, WA	M1	East	8.5318	2.110	22,753
					West	9.3735	2.110	24,998
5.400	6.310	VAN ASSELT, WA	RHODES, WA	M3	East	8.5318	0.910	9,813
					West	9.3735	0.910	10,781
6.310	6.580	RHODES, WA	BOEING, WA	M1	East	8.5318	0.270	2,912
					West	9.3735	0.270	3,199
6.310	6.580	RHODES, WA	BOEING, WA	M2	East	8.5318	0.270	2,912
					West	9.3735	0.270	3,199
6.310	6.580	RHODES, WA	BOEING, WA	M3	East	8.5318	0.270	2,912
					West	9.3735	0.270	3,199
6.580	7.900	BOEING, WA	SOUTH SEATTLE, WA	M1	East	8.5318	1.320	14,234
					West	9.3735	1.320	15,638
6.580	9.970	BOEING, WA	BLACK RIVER, WA	M2	East	7.8523	3.390	33,644
					West	8.7742	3.390	37,594
6.580	9.530	BOEING, WA	RENTON JCT, WA	M3	East	7.9203	2.950	29,531
					West	8.8331	2.950	32,934
7.900	9.970	SOUTH SEATTLE, WA	BLACK RIVER, WA	M1	East	7.4190	2.070	19,410
					West	8.3921	2.070	21,956
9.530	9.967	RENTON JCT, WA	BLACK RIVER, WA	M3	East	7.3716	0.437	4,072
					West	8.3511	0.437	4,613
9.970	10.260	BLACK RIVER, WA	CP TUKWILA, WA	M1	East	11.0574	0.290	4,053
					West	12.5267	0.290	4,591
9.970	10.260	BLACK RIVER, WA	CP TUKWILA, WA	M2	East	11.0574	0.290	4,053
					West	12.5267	0.290	4,591

	10.260	11.320	CP TUKWILA, WA	GLACIER PARK, WA	M1	East	11.0574	1.060	14,814
						West	12.5267	1.060	16,782
	10.260	11.320	CP TUKWILA, WA	GLACIER PARK, WA	M2	East	11.0574	1.060	14,814
						West	12.5267	1.060	16,782
	11.320	16.900	GLACIER PARK, WA	WILLIS, WA	M1	East	11.0344	5.580	77,821
						West	12.5301	5.580	88,370
	11.320	13.300	GLACIER PARK, WA	ORILLIA, WA	M2	East	11.0579	1.980	27,673
						West	12.5287	1.980	31,353
	13.300	15.700	ORILLIA, WA	JAMES STREET, WA	M2	East	11.0583	2.400	33,544
						West	12.5302	2.400	38,009
	15.700	16.900	JAMES STREET, WA	WILLIS, WA	M2	East	10.9479	1.200	16,604
						West	12.5323	1.200	19,008
	16.900	20.970	WILLIS, WA	AUBURN NORTH, WA	M1	East	10.8927	4.070	56,033
						West	12.5334	4.070	64,473
	16.900	20.970	WILLIS, WA	AUBURN NORTH, WA	M2	East	10.8927	4.070	56,033
						West	12.5334	4.070	64,473
	20.970	24.070	AUBURN NORTH, WA	PACIFIC, WA	M1	East	12.0053	3.100	47,038
						West	13.0056	3.100	50,957
	20.970	21.600	AUBURN NORTH, WA	RAINIER, WA	M2	East	11.1057	0.630	8,843
						West	12.6238	0.630	10,052
	21.600	21.993	RAINIER, WA	AUBURN YARD, WA	M2	East	12.2348	0.393	6,077
						West	13.1030	0.393	6,508
	21.993	23.840	AUBURN YARD, WA	ELLINGSON, WA	M2	East	12.2348	1.847	28,561
						West	13.1030	1.847	30,588
	23.840	24.070	ELLINGSON, WA	PACIFIC, WA	M2	East	12.2348	0.230	3,557
						West	13.1030	0.230	3,809
	24.070	24.865	PACIFIC, WA	PIERCE County, Washington	M1	East	12.2348	0.795	12,296
						West	13.1032	0.795	13,169
	24.070	24.865	PACIFIC, WA	PIERCE County, Washington	M2	East	12.2348	0.795	12,296
						West	13.1032	0.795	13,169
403	24.000	26.377	WOODINVILLE, WA	SNOHOMISH County, Washington	M0	East	0.1041	2.377	313
						West	0.0877	2.377	264
405	2.240	4.300	EAST RENTON, WA	SCOPA, WA	M0	East	0.0163	2.060	42
						West	0.0177	2.060	46
	4.300	4.400	SCOPA, WA	MP 4.4, WA	M0	East	0.0163	0.100	2
						West	0.0177	0.100	2
	4.400	12.000	MP 4.4, WA	WILBURTON, WA	M0	East	0.0163	7.600	157
						West	0.0177	7.600	170

	12.000	12.840	WILBURTON, WA	WEST BELLEVUE, WA	M0	East	0.0225	0.840	24
						West	0.0229	0.840	24
	12.840	13.570	WEST BELLEVUE, WA	EAST BELLEVUE, WA	M0	East	0.0814	0.730	75
						West	0.0733	0.730	68
	13.570	17.000	EAST BELLEVUE, WA	KIRKLAND, WA	M0	East	0.0814	3.430	353
						West	0.0733	3.430	318
	17.000	23.100	KIRKLAND, WA	MP 23.1, WA	M0	East	0.0814	6.100	628
						West	0.0733	6.100	565
	23.100	24.067	MP 23.1, WA	WOODINVILLE, WA	M0	East	0.0814	0.967	99
						West	0.0733	0.967	90
410	9.500	12.080	BLACK RIVER, WA	EAST RENTON, WA	M0	East	0.2755	2.580	898
						West	0.1619	2.580	528

KING County, Washington	**Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons**	**4,443,237**
	Estimated 2008 Main Line Mileage	**179.9**

KING County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 10		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	47.01	9.6	5.29	52.30
Carbon Monoxide	27.4	134.16	27.4	15.10	149.26
Nitrogen Oxides	172.5	844.64	172.5	95.05	939.68
Particulates	6	29.38	6	3.31	32.68
Sulfur Dioxide	16.3	79.81	16.3	8.98	88.79

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

KITSAP County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons

KITSAP County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **0**

Estimated 2008 Main Line Mileage **0.0**

KITSAP County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	0.00	9.6	0.00	0.00
Carbon Monoxide	27.4	0.00	27.4	0.00	0.00
Nitrogen Oxides	172.5	0.00	172.5	0.00	0.00
Particulates	6	0.00	6	0.00	0.00
Sulfur Dioxide	16.3	0.00	16.3	0.00	0.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

KITTITAS County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
48	101.310	109.540	YAKIMA County, Washington	EAST WYMER, WA	M0	East	3.7929	8.230	39,454
						West	5.6772	8.230	59,054
	109.540	121.190	EAST WYMER, WA	THRALL, WA	M0	East	3.7266	11.650	54,872
						West	5.6311	11.650	82,915
	121.190	126.230	THRALL, WA	END SUB, WA	M0	East	3.7212	5.040	23,704
						West	5.6273	5.040	35,846
	126.230	127.000	BEGIN SUB, WA	ELLENSBURG, WA	M0	East	3.7212	0.770	3,621
						West	5.6273	0.770	5,477
49	26.700	34.000	YAKIMA County, Washington	MP 34, WA	M0	East	3.7837	7.300	34,910
						West	5.6423	7.300	52,059
	34.000	36.914	MP 34, WA	EAST EASTON, WA	M0	East	3.7806	2.914	13,924
						West	5.6410	2.914	20,776
	36.914	41.060	EAST EASTON, WA	WEST EASTON, WA	M1	East	1.8916	4.146	9,912
						West	2.8223	4.146	14,789
	36.914	41.060	EAST EASTON, WA	WEST EASTON, WA	M2	East	1.8916	4.146	9,912
						West	2.8223	4.146	14,789
	41.060	45.970	WEST EASTON, WA	EAST MARTIN, WA	M0	East	3.7845	4.910	23,486
						West	5.6463	4.910	35,040
	45.970	46.470	EAST MARTIN, WA	WEST MARTIN, WA	M0	East	3.7845	0.500	2,392
						West	5.6463	0.500	3,568
	46.470	47.529	WEST MARTIN, WA	KING County, Washington	M0	East	3.7837	1.059	5,066
						West	5.6455	1.059	7,558

KITTITAS County

2008 Estimation of BNSF Locomotive Emissions

POLLUTANT	LINE HAUL LOCOMOTIVES EPA Emission Factor g/gal	LINE HAUL LOCOMOTIVES Emissions in Tons/Year	YARD LOCOMOTIVES* 0 EPA Emission Factor g/gal	YARD LOCOMOTIVES* 0 Emissions in Tons/Year	**TOTAL Emissions in Tons/Year**
Hydrocarbon	9.6	5.85	9.6	0.00	5.85
Carbon Monoxide	27.4	16.70	27.4	0.00	16.70
Nitrogen Oxides	172.5	105.15	172.5	0.00	105.15
Particulates	6	3.66	6	0.00	3.66
Sulfur Dioxide	16.3	9.94	16.3	0.00	9.94

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

KLICKITAT County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
47	72.822	75.922	SKAMANIA County, Washington	EAST COOKS, WA	M0	East	28.0873	3.100	110,045
						West	60.7948	3.100	238,192
	75.922	78.220	EAST BINGEN, WA	WEST BINGEN, WA	M0	East	28.0940	2.298	81,598
						West	60.8018	2.298	176,596
	78.220	86.200	WEST LYLE, WA	EAST BINGEN, WA	M0	East	28.0940	7.980	283,355
						West	60.8018	7.980	613,244
	86.200	87.900	EAST LYLE, WA	WEST LYLE, WA	M0	East	28.0934	1.700	60,362
						West	60.8019	1.700	130,641
	87.900	91.870	WEST NORTH DALLES, WA	EAST LYLE, WA	M0	East	28.0928	3.970	140,961
						West	60.8021	3.970	305,086
	91.870	93.910	EAST NORTH DALLES, WA	WEST NORTH DALLES, WA	M0	East	28.0928	2.040	72,433
						West	60.8021	2.040	156,770
	93.910	102.380	AVERY END 2MT, WA	EAST NORTH DALLES, WA	M0	East	28.0965	8.470	300,780
						West	60.8246	8.470	651,143
	102.380	104.800	WEST WISHRAM, WA	AVERY END 2MT, WA	M1	East	14.0583	2.420	42,999
						West	30.4204	2.420	93,045
	102.380	104.800	WEST WISHRAM, WA	AVERY END 2MT, WA	M2	East	14.0583	2.420	42,999
						West	30.4204	2.420	93,045
	104.800	105.980	WISHRAM BEGIN 2MT, WA	WEST WISHRAM, WA	M1	East	14.0774	1.180	20,995
						West	30.4350	1.180	45,391
	104.800	105.980	WISHRAM BEGIN 2MT, WA	WEST WISHRAM, WA	M2	East	14.0774	1.180	20,995
						West	30.4350	1.180	45,391
	105.980	107.727	EAST WISHRAM, WA	WISHRAM BEGIN 2MT, WA	M0	East	27.2755	1.747	60,225
						West	62.2856	1.747	137,529
	107.727	112.837	WEST MARYHILL, WA	EAST WISHRAM, WA	M0	East	27.2049	5.110	175,704
						West	62.3995	5.110	403,010
	112.837	114.317	EAST MARYHILL, WA	WEST MARYHILL, WA	M0	East	27.2050	1.480	50,889
						West	62.3995	1.480	116,723
	114.317	123.846	WEST TOWAL, WA	EAST MARYHILL, WA	M0	East	27.2060	9.529	327,662
						West	62.3999	9.529	751,528
	123.846	125.712	EAST TOWAL, WA	WEST TOWAL, WA	M0	East	27.2057	1.866	64,163
						West	62.3979	1.866	147,162
	125.712	135.191	WEST BATES, WA	EAST TOWAL, WA	M0	East	27.2041	9.479	325,920
						West	62.3941	9.479	747,515

	135.191	136.670	EAST BATES, WA	WEST BATES, WA	M0	East	27.2042	1.479	50,853
						West	62.3941	1.479	116,634
	136.670	147.046	WEST ROOSEVELT, WA	EAST BATES, WA	M0	East	27.2044	10.376	356,765
						West	62.3941	10.376	818,252
	147.046	148.780	EAST ROOSEVELT, WA	WEST ROOSEVELT, WA	M0	East	25.2113	1.734	55,253
						West	61.6814	1.734	135,181
	148.780	156.923	WEST MCCREDIE, WA	EAST ROOSEVELT, WA	M0	East	23.6780	8.143	243,693
						West	61.1331	8.143	629,180
	156.923	158.403	EAST MCCREDIE, WA	WEST MCCREDIE, WA	M0	East	23.6781	1.480	44,292
						West	61.1331	1.480	114,354
	158.403	164.882	WEST WHITCOMB, WA	BENTON County, Washington	M0	East	23.6783	6.479	193,903
						West	61.1331	6.479	500,622
53	0.193	0.564	WISHRAM, WA	WASCO County, Oregon	M0	East	4.6212	0.371	2,165
						West	7.1250	0.371	3,338

KLICKITAT County, Washington	**Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons**	**10,298,580**
	Estimated 2008 Main Line Mileage	**92.4**

KLICKITAT County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	108.95	9.6	0.00	108.95
Carbon Monoxide	27.4	310.96	27.4	0.00	310.96
Nitrogen Oxides	172.5	1957.71	172.5	0.00	1957.71
Particulates	6	68.09	6	0.00	68.09
Sulfur Dioxide	16.3	184.99	16.3	0.00	184.99

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

LEWIS County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
52	50.569	52.434	THURSTON County, Washington	CENTRALIA NORTH, WA	M1	East	9.4635	1.865	22,310
						West	13.7871	1.865	32,503
	50.569	54.005	THURSTON County, Washington	CENTRALIA, WA	M2	East	9.4646	3.436	41,106
						West	13.7924	3.436	59,902
	52.434	54.005	CENTRALIA NORTH, WA	CENTRALIA, WA	M1	East	9.4667	1.571	18,797
						West	13.8022	1.571	27,406
	54.005	55.700	CENTRALIA, WA	CENTRALIA SOUTH, WA	M1	East	10.4745	1.695	22,440
						West	17.6175	1.695	37,742
	54.005	55.700	CENTRALIA, WA	CENTRALIA SOUTH, WA	M2	East	10.4745	1.695	22,440
						West	17.6175	1.695	37,742
	55.700	58.605	CENTRALIA SOUTH, WA	CHEHALIS JCT, WA	M1	East	10.4275	2.905	38,286
						West	17.5745	2.905	64,527
	55.700	58.605	CENTRALIA SOUTH, WA	CHEHALIS JCT, WA	M2	East	10.4275	2.905	38,286
						West	17.5745	2.905	64,527
	58.605	66.307	CHEHALIS JCT, WA	NAPAVINE SOUTH, WA	M1	East	10.3204	7.702	100,465
						West	17.4627	7.702	169,992
	58.605	66.307	CHEHALIS JCT, WA	NAPAVINE SOUTH, WA	M2	East	10.3204	7.702	100,465
						West	17.4627	7.702	169,992
	66.307	72.000	NAPAVINE SOUTH, WA	CP 72, WA	M1	East	10.3200	5.693	74,257
						West	17.3907	5.693	125,133
	66.307	72.000	NAPAVINE SOUTH, WA	CP 72, WA	M2	East	10.3200	5.693	74,257
						West	17.3907	5.693	125,133
	72.000	77.073	CP 72, WA	VADER, WA	M1	East	10.3200	5.073	66,170
						West	17.3907	5.073	111,505
	72.000	77.073	CP 72, WA	VADER, WA	M2	East	10.3200	5.073	66,170
						West	17.3907	5.073	111,505
	77.073	79.006	VADER, WA	COWLITZ County, Washington	M1	East	10.3190	1.933	25,214
						West	17.3967	1.933	42,508
	77.073	79.006	VADER, WA	COWLITZ County, Washington	M2	East	10.3190	1.933	25,214
						West	17.3967	1.933	42,508

LEWIS County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **1,958,499**

Estimated 2008 Main Line Mileage **31.9**

LEWIS County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 2		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	20.72	9.6	1.06	21.78
Carbon Monoxide	27.4	59.14	27.4	3.02	62.16
Nitrogen Oxides	172.5	372.30	172.5	19.01	391.31
Particulates	6	12.95	6	0.66	13.61
Sulfur Dioxide	16.3	35.18	16.3	1.80	36.98

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

LINCOLN County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
37	1504.018	1509.913	SPOKANE County, Washington	EAST EDWALL, WA	M0	East	14.3431	5.895	106,864
						West	12.4133	5.895	92,486
	1509.913	1511.497	EAST EDWALL, WA	WEST EDWALL, WA	M0	East	14.3432	1.584	28,715
						West	12.4135	1.584	24,852
	1511.497	1520.629	WEST EDWALL, WA	BLUESTEM, WA	M0	East	14.3433	9.132	165,550
						West	12.4124	9.132	143,263
	1520.629	1541.762	BLUESTEM, WA	LAMONA, WA	M1	East	7.1637	21.133	191,343
						West	6.1984	21.133	165,560
	1520.629	1541.762	BLUESTEM, WA	LAMONA, WA	M2	East	7.1637	21.133	191,343
						West	6.1984	21.133	165,560
	1541.762	1551.567	LAMONA, WA	EAST ODESSA, WA	M0	East	14.3193	9.805	177,453
						West	12.3892	9.805	153,534
	1551.567	1553.492	EAST ODESSA, WA	WEST ODESSA, WA	M0	East	14.3186	1.925	34,837
						West	12.3878	1.925	30,140
	1553.492	1564.588	WEST ODESSA, WA	EAST GIBSON, WA	M0	East	14.3171	11.096	200,787
						West	12.3859	11.096	173,703
	1564.588	1566.552	EAST GIBSON, WA	WEST GIBSON, WA	M0	East	14.3169	1.964	35,539
						West	12.3866	1.964	30,747
	1566.552	1568.952	WEST GIBSON, WA	GRANT County, Washington	M0	East	14.3047	2.400	43,396
						West	12.3869	2.400	37,578
46	30.306	31.388	SPOKANE County, Washington	WEST FISHTRAP, WA	M0	East	27.5612	1.082	37,685
						West	66.9860	1.082	91,591
	31.388	42.117	WEST FISHTRAP, WA	EAST SPRAGUE, WA	M0	East	27.3672	10.729	371,111
						West	66.9985	10.729	908,527
	42.117	43.803	EAST SPRAGUE, WA	WEST SPRAGUE, WA	M0	East	27.2235	1.686	58,012
						West	66.9907	1.686	142,753
	43.803	46.859	WEST SPRAGUE, WA	ADAMS County, Washington	M0	East	27.2208	3.056	105,123
						West	66.9875	3.056	258,698
378	23.675	89.785	SPOKANE County, Washington	GRANT County, Washington	M1	East	0.0000	66.110	0
						West	0.0000	66.110	0

LINCOLN County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **4,166,750**

Estimated 2008 Main Line Mileage **147.6**

LINCOLN County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	44.08	9.6	0.00	44.08
Carbon Monoxide	27.4	125.81	27.4	0.00	125.81
Nitrogen Oxides	172.5	792.08	172.5	0.00	792.08
Particulates	6	27.55	6	0.00	27.55
Sulfur Dioxide	16.3	74.85	16.3	0.00	74.85

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

MASON County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons

MASON County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **0**

Estimated 2008 Main Line Mileage **0.0**

MASON County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 0		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	0.00	9.6	0.00	0.00
Carbon Monoxide	27.4	0.00	27.4	0.00	0.00
Nitrogen Oxides	172.5	0.00	172.5	0.00	0.00
Particulates	6	0.00	6	0.00	0.00
Sulfur Dioxide	16.3	0.00	16.3	0.00	0.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

OKANOGAN County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons

OKANOGAN County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **0**

Estimated 2008 Main Line Mileage **0.0**

OKANOGAN County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	0.00	9.6	0.00	0.00
Carbon Monoxide	27.4	0.00	27.4	0.00	0.00
Nitrogen Oxides	172.5	0.00	172.5	0.00	0.00
Particulates	6	0.00	6	0.00	0.00
Sulfur Dioxide	16.3	0.00	16.3	0.00	0.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

PACIFIC County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons

PACIFIC County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **0**

Estimated 2008 Main Line Mileage **0.0**

PACIFIC County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	0.00	9.6	0.00	0.00
Carbon Monoxide	27.4	0.00	27.4	0.00	0.00
Nitrogen Oxides	172.5	0.00	172.5	0.00	0.00
Particulates	6	0.00	6	0.00	0.00
Sulfur Dioxide	16.3	0.00	16.3	0.00	0.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

PEND OREILLE County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons

PEND OREILLE County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **0**

Estimated 2008 Main Line Mileage **0.0**

PEND OREILLE County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	0.00	9.6	0.00	0.00
Carbon Monoxide	27.4	0.00	27.4	0.00	0.00
Nitrogen Oxides	172.5	0.00	172.5	0.00	0.00
Particulates	6	0.00	6	0.00	0.00
Sulfur Dioxide	16.3	0.00	16.3	0.00	0.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

PIERCE County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
51	24.865	29.660	KING County, Washington	CP SUMNER, WA	M1	East	12.2348	4.795	74,145
						West	13.1032	4.795	79,408
	24.865	29.660	KING County, Washington	CP SUMNER, WA	M2	East	12.2348	4.795	74,145
						West	13.1032	4.795	79,408
	29.660	33.940	CP SUMNER, WA	STEWART, WA	M1	East	12.2213	4.280	66,111
						West	13.1108	4.280	70,923
	29.660	33.940	CP SUMNER, WA	STEWART, WA	M2	East	12.2213	4.280	66,111
						West	13.1108	4.280	70,923
	33.940	37.830	STEWART, WA	CLEAR CREEK, WA	M1	East	12.2109	3.890	60,036
						West	13.1160	3.890	64,486
	33.940	37.830	STEWART, WA	CLEAR CREEK, WA	M2	East	12.2109	3.890	60,036
						West	13.1160	3.890	64,486
	37.830	38.240	CLEAR CREEK, WA	TR JCT, WA	M1	East	12.2037	0.410	6,324
						West	13.1364	0.410	6,807
	37.830	38.240	CLEAR CREEK, WA	TR JCT, WA	M2	East	12.2037	0.410	6,324
						West	13.1364	0.410	6,807
	38.240	38.570	TR JCT, WA	BAY STREET, WA	M1	East	12.1690	0.330	5,076
						West	13.2355	0.330	5,520
	38.240	38.570	TR JCT, WA	BAY STREET, WA	M2	East	12.1690	0.330	5,076
						West	13.2355	0.330	5,520
	38.570	38.900	BAY STREET, WA	RIVER STREET, WA	M1	East	12.1690	0.330	5,076
						West	13.2355	0.330	5,520
	38.570	39.040	BAY STREET, WA	CP TACOMA, WA	M2	East	12.1690	0.470	7,229
						West	13.2355	0.470	7,862
	39.040	39.591	CP TACOMA, WA	D STREET, WA	M2	East	12.1690	0.551	8,475
						West	13.2355	0.551	9,217
	39.591	40.023	D STREET, WA	END STATE, WA	M2	East	12.1690	0.432	6,644
						West	13.2355	0.432	7,227
52	0.000	1.400	21ST STREET, WA	DAVIS, WA	M1	East	9.6622	1.400	17,097
						West	13.8566	1.400	24,519
	0.000	3.220	21ST STREET, WA	HARBOR, WA	M2	East	9.6654	3.220	39,336
						West	13.8551	3.220	56,387

	1.400	3.220	DAVIS, WA	HARBOR, WA	M1	East	9.6679	1.820	22,239
						West	13.8540	1.820	31,868
	3.220	5.140	HARBOR, WA	RUSTON, WA	M1	East	9.6679	1.920	23,461
						West	13.8540	1.920	33,619
	3.220	5.140	HARBOR, WA	RUSTON, WA	M2	East	9.6679	1.920	23,461
						West	13.8540	1.920	33,619
	5.140	6.550	RUSTON, WA	NELSON BENNETT, WA	M0	East	19.3016	1.410	34,397
						West	27.6963	1.410	49,358
	6.550	10.000	NELSON BENNETT, WA	TITLOW, WA	M1	East	9.6449	3.450	42,056
						West	13.8461	3.450	60,375
	6.550	10.000	NELSON BENNETT, WA	TITLOW, WA	M2	East	9.6449	3.450	42,056
						West	13.8461	3.450	60,375
	10.000	13.567	TITLOW, WA	PIONEER, WA	M1	East	9.6436	3.567	43,477
						West	13.8448	3.567	62,417
	10.000	13.567	TITLOW, WA	PIONEER, WA	M2	East	9.6436	3.567	43,477
						West	13.8448	3.567	62,417
	13.567	24.701	PIONEER, WA	NISQUALLY, WA	M1	East	9.6349	11.134	135,585
						West	13.8343	11.134	194,680
	13.567	24.701	PIONEER, WA	NISQUALLY, WA	M2	East	9.6349	11.134	135,585
						West	13.8343	11.134	194,680
	24.701	25.380	NISQUALLY, WA	THURSTON County, Washington	M1	East	9.5609	0.679	8,205
						West	13.8212	0.679	11,861
	24.701	25.380	NISQUALLY, WA	THURSTON County, Washington	M2	East	9.5609	0.679	8,205
						West	13.8212	0.679	11,861
400	0.794	3.000	BEGIN STATE, WA	S TACOMA, WA	M0	East	0.0542	2.206	151
						West	0.0151	2.206	42
	8.920	9.700	WEST LAKEVIEW, WA	MP 9.7, WA	M0	East	0.0670	0.780	66
						West	0.1284	0.780	127
	9.700	20.050	MP 9.7, WA	EAST ROY, WA	M0	East	0.0571	10.350	747
						West	0.1081	10.350	1,414
	20.050	20.950	EAST ROY, WA	WEST ROY, WA	M0	East	0.0542	0.900	62
						West	0.1022	0.900	116
401	0.000	11.325	LAKEVIEW, WA	END STATE, WA	M0	East	0.1133	11.325	1,622
						West	0.0128	11.325	183

PIERCE County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **2,446,127**

Estimated 2008 Main Line Mileage **69.6**

PIERCE County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 8		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	25.88	9.6	4.23	30.11
Carbon Monoxide	27.4	73.86	27.4	12.08	85.94
Nitrogen Oxides	172.5	465.00	172.5	76.04	541.03
Particulates	6	16.17	6	2.64	18.82
Sulfur Dioxide	16.3	43.94	16.3	7.19	51.12

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

SKAGIT County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
50	59.497	66.145	SNOHOMISH County, Washington	SOUTH MT VERNON, WA	M0	East	13.7597	6.648	115,608
						West	9.9717	6.648	83,782
	66.145	67.434	SOUTH MT VERNON, WA	NORTH MT VERNON, WA	M0	East	13.7633	1.289	22,423
						West	9.9707	1.289	16,244
	67.434	70.362	NORTH MT VERNON, WA	SOUTH BURLINGTON, WA	M0	East	13.7784	2.928	50,990
						West	9.9640	2.928	36,874
	70.362	71.870	SOUTH BURLINGTON, WA	BURLINGTON, WA	M0	East	13.8077	1.508	26,317
						West	9.9512	1.508	18,967
	71.870	72.076	BURLINGTON, WA	NORTH BURLINGTON, WA	M0	East	11.9679	0.206	3,116
						West	8.4630	0.206	2,203
	72.076	79.074	NORTH BURLINGTON, WA	SOUTH BOW, WA	M0	East	11.9679	6.998	105,854
						West	8.4630	6.998	74,853
	79.074	80.907	SOUTH BOW, WA	NORTH BOW, WA	M0	East	11.8237	1.833	27,392
						West	8.4535	1.833	19,585
	80.907	86.845	NORTH BOW, WA	WHATCOM County, Washington	M0	East	11.7984	5.938	88,544
						West	8.4436	5.938	63,367
403	85.781	93.570	SEDRO WOOLLEY, WA	WEST THORNWOOD, WA	M0	East	0.6093	7.789	5,998
						West	0.7701	7.789	7,581
	93.570	98.241	WEST THORNWOOD, WA	WHATCOM County, Washington	M0	East	0.6134	4.671	3,621
						West	0.7563	4.671	4,465
409	3.980	16.610	ANACORTES, WA	BURLINGTON, WA	M0	East	0.7376	12.630	11,774
						West	0.9229	12.630	14,732
	16.610	22.000	BURLINGTON, WA	SEDRO WOOLLEY, WA	M0	East	0.6120	5.390	4,169
						West	0.7728	5.390	5,265

SKAGIT County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **813,726**

Estimated 2008 Main Line Mileage **57.8**

SKAGIT County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 4		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	8.61	9.6	2.12	10.72
Carbon Monoxide	27.4	24.57	27.4	6.04	30.61
Nitrogen Oxides	172.5	154.69	172.5	38.02	192.70
Particulates	6	5.38	6	1.32	6.70
Sulfur Dioxide	16.3	14.62	16.3	3.59	18.21

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

SKAMANIA County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
47	32.217	41.512	CLARK County, Washington	EAST WASHOUGAL, WA	M0	East	28.0317	9.295	329,321
						West	60.8037	9.295	714,332
	41.512	43.601	EAST SKAMANIA, WA	WEST SKAMANIA, WA	M0	East	28.0292	2.089	74,005
						West	60.7996	2.089	160,529
	43.601	53.675	WEST STEVENSON, WA	EAST SKAMANIA, WA	M0	East	28.0287	10.074	356,877
						West	60.8036	10.074	774,185
	53.675	55.887	EAST STEVENSON, WA	WEST STEVENSON, WA	M0	East	27.9624	2.212	78,176
						West	60.7342	2.212	169,798
	55.887	63.928	WEST COOKS, WA	EAST STEVENSON, WA	M0	East	28.0354	8.041	284,925
						West	60.7662	8.041	617,570
	63.928	65.941	EAST COOKS, WA	WEST COOKS, WA	M0	East	28.0920	2.013	71,473
						West	60.7935	2.013	154,673
	65.941	72.822	WEST BINGEN, WA	KLICKITAT County, Washington	M0	East	28.0873	6.881	244,277
						West	60.7948	6.881	528,736

SKAMANIA County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **4,558,876**

Estimated 2008 Main Line Mileage **40.6**

SKAMANIA County

2008 Estimation of BNSF Locomotive Emissions

POLLUTANT	LINE HAUL LOCOMOTIVES EPA Emission Factor g/gal	LINE HAUL LOCOMOTIVES Emissions in Tons/Year	YARD LOCOMOTIVES* 0 EPA Emission Factor g/gal	YARD LOCOMOTIVES* 0 Emissions in Tons/Year	**TOTAL Emissions in Tons/Year**
Hydrocarbon	9.6	48.23	9.6	0.00	48.23
Carbon Monoxide	27.4	137.65	27.4	0.00	137.65
Nitrogen Oxides	172.5	866.62	172.5	0.00	866.62
Particulates	6	30.14	6	0.00	30.14
Sulfur Dioxide	16.3	81.89	16.3	0.00	81.89

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

SNOHOMISH County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
37	1740.317	1740.534	KING County, Washington	WEST BARING, WA	M0	East	14.7398	0.217	4,048
						West	13.2073	0.217	3,628
	1740.534	1754.608	WEST BARING, WA	EAST GOLD BAR, WA	M0	East	14.7398	14.074	262,194
						West	13.2076	14.074	234,939
	1754.608	1756.726	EAST GOLD BAR, WA	WEST GOLD BAR, WA	M0	East	14.7790	2.118	39,563
						West	13.2271	2.118	35,408
	1756.726	1768.334	WEST GOLD BAR, WA	EAST MONROE, WA	M0	East	14.8267	11.608	217,528
						West	13.2510	11.608	194,411
	1768.334	1770.652	EAST MONROE, WA	WEST MONROE, WA	M0	East	14.8402	2.318	43,478
						West	13.2501	2.318	38,819
	1770.652	1776.213	WEST MONROE, WA	SNOHOMISH JCT WEST, WA	M0	East	14.8524	5.561	104,391
						West	13.2573	5.561	93,180
	1776.213	1781.142	SNOHOMISH JCT WEST, WA	LOWELL, WA	M0	East	14.9362	4.929	93,049
						West	13.3141	4.929	82,944
	1781.142	1782.608	LOWELL, WA	PA JCT, WA	M0	East	14.8803	1.466	27,571
						West	13.3078	1.466	24,658
	1782.608	1782.900	PA JCT, WA	BROADWAY, WA	M0	East	24.7730	0.292	9,143
						West	26.8968	0.292	9,927
	1782.900	1784.475	BROADWAY, WA	END STATE, WA	M0	East	23.6106	1.575	47,000
						West	26.0222	1.575	51,801
50	15.007	15.874	KING County, Washington	BLUE RIDGE, WA	M1	East	11.0337	0.867	12,085
						West	12.3223	0.867	13,497
	15.007	15.874	KING County, Washington	BLUE RIDGE, WA	M2	East	11.0337	0.867	12,085
						West	12.3223	0.867	13,497
	15.874	17.796	MP 18, WA	MP 16, WA	M0	East	22.0945	1.922	53,672
						West	24.7112	1.922	60,029
	17.796	27.050	MP 27, WA	MP 18, WA	M1	East	11.0294	9.254	129,002
						West	12.3928	9.254	144,948
	17.796	27.050	MP 27, WA	MP 18, WA	M2	East	11.0294	9.254	129,002
						West	12.3928	9.254	144,948
	27.050	27.837	MP 28, WA	MP 27, WA	M0	East	22.0588	0.787	21,942
						West	24.7857	0.787	24,654

	27.837	28.923	CP MUKILTEO, WA	MP 28, WA	M1	East	11.0455	1.086	15,161
						West	12.4098	1.086	17,034
	27.837	28.923	CP MUKILTEO, WA	MP 28, WA	M2	East	11.0455	1.086	15,161
						West	12.4098	1.086	17,034
	28.923	31.449	HOWARTH PARK, WA	CP MUKILTEO, WA	M1	East	11.0543	2.526	35,292
						West	12.4201	2.526	39,653
	28.923	31.449	HOWARTH PARK, WA	CP MUKILTEO, WA	M2	East	11.0543	2.526	35,292
						West	12.4201	2.526	39,653
	31.449	32.159	EVERETT JCT, WA	HOWARTH PARK, WA	M1	East	10.2906	0.710	9,234
						West	11.5623	0.710	10,376
	31.449	32.159	EVERETT JCT, WA	HOWARTH PARK, WA	M2	East	10.2906	0.710	9,234
						West	11.5623	0.710	10,376
	32.159	32.160	EVERETT JCT, WA	END SUB, WA	M0	East	0.0026	0.001	0
						West	0.0039	0.001	0
	32.160	36.980	BEGIN SUB, WA	BRIDGE 37, WA	M0	East	0.0026	4.820	16
						West	0.0039	4.820	24
	36.980	37.685	BRIDGE 37, WA	BRIDGE 37.8, WA	M0	East	13.3521	0.705	11,897
						West	9.6998	0.705	8,643
	37.685	38.237	BRIDGE 37.8, WA	BRIDGE 38.3, WA	M0	East	13.7419	0.552	9,587
						West	9.9829	0.552	6,965
	38.237	44.775	BRIDGE 38.3, WA	SOUTH ENGLISH, WA	M0	East	13.7580	6.538	113,688
						West	9.9819	6.538	82,484
	44.775	46.238	SOUTH ENGLISH, WA	NORTH ENGLISH, WA	M0	East	13.7767	1.463	25,474
						West	9.9781	1.463	18,450
	46.238	55.179	NORTH ENGLISH, WA	SOUTH STANWOOD, WA	M0	East	13.7764	8.941	155,681
						West	9.9773	8.941	112,749
	55.179	56.547	SOUTH STANWOOD, WA	NORTH STANWOOD, WA	M0	East	13.7614	1.368	23,794
						West	9.9732	1.368	17,244
	56.547	59.497	NORTH STANWOOD, WA	SKAGIT County, Washington	M0	East	13.7597	2.950	51,310
						West	9.9717	2.950	37,184
403	26.377	30.190	KING County, Washington	EAST MALTBY, WA	M0	East	0.1041	3.813	502
						West	0.0877	3.813	423
	30.190	39.110	EAST MALTBY, WA	BROMART, WA	M0	East	0.1100	8.920	1,240
						West	0.0866	8.920	976
406	0.000	7.140	KRUSE JCT, WA	END SUB, WA	M0	East	0.4709	7.140	4,250
						West	0.4481	7.140	4,044
	7.140	8.190	BEGIN SUB, WA	ARLINGTON, WA	M0	East	0.4709	1.050	625
						West	0.4481	1.050	595

407	0.000	0.714	PA JUNCTION, WA	END STATE, WA	M0	East	13.6841	0.714	12,349
						West	9.9721	0.714	8,999
408	6.400	8.010	DELTA JCT, WA	END SUB, WA	M0	East	7.6681	1.610	15,604
						West	5.5542	1.610	11,302
	8.010	10.894	BEGIN SUB, WA	END SUB, WA	M0	East	7.6681	2.884	27,951
						West	5.5542	2.884	20,246

SNOHOMISH County, Washington	**Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons**	**3,414,834**
	Estimated 2008 Main Line Mileage	**114.8**

SNOHOMISH County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 4		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	36.13	9.6	2.12	38.24
Carbon Monoxide	27.4	103.11	27.4	6.04	109.15
Nitrogen Oxides	172.5	649.14	172.5	38.02	687.16
Particulates	6	22.58	6	1.32	23.90
Sulfur Dioxide	16.3	61.34	16.3	3.59	64.93

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

SPOKANE County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
37	1463.630	1468.100	DEAN, WA	MEAD, WA	M0	East	1.3797	4.470	7,795
						West	2.1548	4.470	12,174
	1468.100	1473.000	MEAD, WA	HILLYARD, WA	M0	East	3.0409	4.900	18,833
						West	2.1877	4.900	13,549
	1473.000	1475.400	HILLYARD, WA	MP 1475.4, WA	M0	East	3.1511	2.400	9,558
						West	2.5057	2.400	7,601
	1475.400	1476.200	MP 1475.4, WA	NAPA STREET, WA	M0	East	3.1511	0.800	3,186
						West	2.5057	0.800	2,534
	1481.652	1489.198	LATAH JCT, WA	EAST LYONS, WA	M0	East	14.3683	7.546	137,036
						West	12.4526	7.546	118,766
	1489.198	1490.760	EAST LYONS, WA	WEST LYONS, WA	M0	East	14.3683	1.562	28,366
						West	12.4526	1.562	24,584
	1490.760	1498.649	WEST LYONS, WA	EAST ESPANOLA, WA	M0	East	14.3600	7.889	143,183
						West	12.4349	7.889	123,988
	1498.649	1500.150	EAST ESPANOLA, WA	WEST ESPANOLA, WA	M0	East	14.3458	1.501	27,216
						West	12.4126	1.501	23,548
	1500.150	1504.018	WEST ESPANOLA, WA	LINCOLN County, Washington	M0	East	14.3431	3.868	70,122
						West	12.4133	3.868	60,687
45	53.046	58.889	KOOTENAI County, Idaho	OTIS ORCHARDS, WA	M1	East	20.9506	5.843	154,714
						West	40.8284	5.843	301,506
	53.046	58.889	KOOTENAI County, Idaho	OTIS ORCHARDS, WA	M2	East	20.9506	5.843	154,714
						West	40.8284	5.843	301,506
	58.889	62.990	OTIS ORCHARDS, WA	IRVIN, WA	M0	East	42.0448	4.101	217,929
						West	81.6998	4.101	423,472
	62.990	65.840	IRVIN, WA	PARKWATER, WA	M1	East	21.0973	2.850	75,995
						West	40.8642	2.850	147,198
	62.990	65.840	IRVIN, WA	PARKWATER, WA	M2	East	21.0973	2.850	75,995
						West	40.8642	2.850	147,198
	65.840	68.100	PARKWATER, WA	HAVANNA STREET, WA	M1	East	21.1154	2.260	60,314
						West	40.8663	2.260	116,731
	65.840	68.100	PARKWATER, WA	HAVANNA STREET, WA	M2	East	21.1154	2.260	60,314
						West	40.8663	2.260	116,731

	68.100	69.673	HAVANNA STREET, WA	NAPA ST, WA	M1	East	22.7158	1.573	45,162
						West	41.1499	1.573	81,811
	68.100	69.673	HAVANNA STREET, WA	NAPA ST, WA	M2	East	22.7158	1.573	45,162
						West	41.1499	1.573	81,811
	69.673	69.697	NAPA ST, WA	ERIE, WA	M1	East	22.7158	0.024	689
						West	41.1499	0.024	1,248
	69.673	71.250	NAPA ST, WA	END STATE, WA	M2	East	21.1642	1.577	42,184
						West	39.9160	1.577	79,560
	69.697	71.250	ERIE, WA	END STATE, WA	M1	East	21.1427	1.553	41,500
						West	39.8989	1.553	78,315
46	0.000	1.104	SPOKANE, WA	SUNSET JCT, WA	M1	East	21.1101	1.104	29,456
						West	39.7556	1.104	55,473
	0.000	1.104	SPOKANE, WA	SUNSET JCT, WA	M2	East	21.1101	1.104	29,456
						West	39.7556	1.104	55,473
	1.104	1.114	EAST EMPIRE, WA	END SUB, WA	M0	East	25.7373	0.010	325
						West	1.8260	0.010	23
	1.114	3.898	BEGIN SUB, WA	WEST EMPIRE, WA	M0	East	25.7373	2.784	90,562
						West	1.8260	2.784	6,425
	3.898	8.971	WEST EMPIRE, WA	MARSHALL, WA	M0	East	25.7373	5.073	165,022
						West	1.8243	5.073	11,697
	8.971	11.785	MARSHALL, WA	LAKESIDE JCT, WA	M0	East	25.8467	2.814	91,927
						West	1.9776	2.814	7,034
	11.785	19.816	LAKESIDE JCT, WA	EAST BABB, WA	M0	East	27.7017	8.031	281,183
						West	66.8079	8.031	678,127
	19.816	21.520	EAST BABB, WA	WEST BABB, WA	M0	East	27.5613	1.704	59,359
						West	66.9859	1.704	144,267
	21.520	29.704	WEST BABB, WA	EAST FISHTRAP, WA	M0	East	27.5613	8.184	285,088
						West	66.9859	8.184	692,888
	29.704	30.306	EAST FISHTRAP, WA	LINCOLN County, Washington	M0	East	27.5612	0.602	20,977
						West	66.9860	0.602	50,983
47	365.382	365.848	UP JCT, WA	LAKESIDE JCT., WA	M0	East	0.2271	0.466	134
						West	6.7129	0.466	3,954
	365.848	367.110	SCRIBNER, WA	UP JCT, WA	M0	East	2.2054	1.262	3,518
						West	65.1715	1.262	103,952
	367.110	371.434	EAST OVERLOOK, WA	WEST OVERLOOK, WA	M0	East	2.1796	4.324	11,912
						West	65.1483	4.324	356,043
	371.434	375.121	LATAH JCT, WA	END SUB, WA	M0	East	2.1796	3.687	10,157
						West	65.1482	3.687	303,591
	375.121	375.122	BEGIN SUB, WA	EAST OVERLOOK, WA	M0	East	2.1796	0.001	3
						West	65.1482	0.001	82

376	13.776	26.410	BEGIN STATE, WA	DEER PARK, WA	M0	East	1.2482	12.634	19,931
						West	2.1500	12.634	34,332
	26.410	30.613	DEER PARK, WA	STEVENS County, Washington	M0	East	1.2482	4.203	6,630
						West	2.1498	4.203	11,419

SPOKANE County, Washington	**Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons**	**7,305,886**
	Estimated 2008 Main Line Mileage	**111.6**

SPOKANE County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 10		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	77.29	9.6	5.29	82.58
Carbon Monoxide	27.4	220.60	27.4	15.10	235.70
Nitrogen Oxides	172.5	1388.81	172.5	95.05	1483.86
Particulates	6	48.31	6	3.31	51.61
Sulfur Dioxide	16.3	131.23	16.3	8.98	140.21

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

STEVENS County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
376	30.613	32.000	SPOKANE County, Washington	MP 32, WA	M0	East	1.2482	1.387	2,189
						West	2.1498	1.387	3,770
	32.000	38.190	MP 32, WA	EAST LOON LAKE, WA	M0	East	1.2482	6.190	9,765
						West	2.1498	6.190	16,819
	38.190	38.670	EAST LOON LAKE, WA	WEST LOON LAKE, WA	M0	East	1.2477	0.480	757
						West	2.1493	0.480	1,304
	38.670	47.000	WEST LOON LAKE, WA	MP 47, WA	M0	East	1.2470	8.330	13,129
						West	2.1486	8.330	22,621
	47.000	56.360	MP 47, WA	EAST VALLEY, WA	M0	East	1.2470	9.360	14,752
						West	2.1485	9.360	25,417
	56.360	57.220	EAST VALLEY, WA	WEST VALLEY, WA	M0	East	1.1880	0.860	1,291
						West	1.8323	0.860	1,992
	57.220	61.000	WEST VALLEY, WA	MP 60, WA	M0	East	1.1766	3.780	5,621
						West	1.7709	3.780	8,461
377	8.442	10.932	FERRY County, Washington	FERRY County, Washington	M1	East	0.0000	2.490	0
						West	0.0000	2.490	0

STEVENS County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **127,888**

Estimated 2008 Main Line Mileage **32.9**

STEVENS County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 0		**TOTAL**
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	1.35	9.6	0.00	1.35
Carbon Monoxide	27.4	3.86	27.4	0.00	3.86
Nitrogen Oxides	172.5	24.31	172.5	0.00	24.31
Particulates	6	0.85	6	0.00	0.85
Sulfur Dioxide	16.3	2.30	16.3	0.00	2.30

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

THURSTON County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
52	25.380	37.397	PIERCE County, Washington	PLUMB, WA	M1	East	9.5609	12.017	145,214
						West	13.8212	12.017	209,921
	25.380	37.397	PIERCE County, Washington	PLUMB, WA	M2	East	9.5609	12.017	145,214
						West	13.8212	12.017	209,921
	37.397	49.501	PLUMB, WA	WABASH, WA	M1	East	9.4639	12.104	144,781
						West	13.7872	12.104	210,920
	37.397	49.501	PLUMB, WA	WABASH, WA	M2	East	9.4639	12.104	144,781
						West	13.7872	12.104	210,920
	49.501	50.569	WABASH, WA	LEWIS County, Washington	M1	East	9.4635	1.068	12,771
						West	13.7871	1.068	18,606
	49.501	50.569	WABASH, WA	LEWIS County, Washington	M2	East	9.4646	1.068	12,773
						West	13.7924	1.068	18,613

THURSTON County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **1,484,438**

Estimated 2008 Main Line Mileage **25.2**

THURSTON County

2008 Estimation of BNSF Locomotive Emissions

POLLUTANT	LINE HAUL LOCOMOTIVES EPA Emission Factor g/gal	LINE HAUL LOCOMOTIVES Emissions in Tons/Year	YARD LOCOMOTIVES* 0 EPA Emission Factor g/gal	YARD LOCOMOTIVES* 0 Emissions in Tons/Year	**TOTAL Emissions in Tons/Year**
Hydrocarbon	9.6	15.70	9.6	0.00	15.70
Carbon Monoxide	27.4	44.82	27.4	0.00	44.82
Nitrogen Oxides	172.5	282.18	172.5	0.00	282.18
Particulates	6	9.82	6	0.00	9.82
Sulfur Dioxide	16.3	26.66	16.3	0.00	26.66

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

WALLA WALLA County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons

WALLA WALLA County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **0**

Estimated 2008 Main Line Mileage **0.0**

WALLA WALLA County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 0		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	0.00	9.6	0.00	0.00
Carbon Monoxide	27.4	0.00	27.4	0.00	0.00
Nitrogen Oxides	172.5	0.00	172.5	0.00	0.00
Particulates	6	0.00	6	0.00	0.00
Sulfur Dioxide	16.3	0.00	16.3	0.00	0.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

WHATCOM County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
50	86.845	92.201	SKAGIT County, Washington	SOUTH SOUTH BELLINGHAM, WA	M0	East	11.7984	5.356	79,872
						West	8.4436	5.356	57,161
	92.201	97.180	BELLINGHAM, WA	SOUTH SOUTH BELLINGHAM, WA	M0	East	11.7974	4.979	74,241
						West	8.4415	4.979	53,122
	97.180	106.400	SOUTH FERNDALE, WA	BELLINGHAM, WA	M0	East	12.4083	9.220	144,596
						West	9.1542	9.220	106,676
	106.400	108.196	SOUTH FERNDALE, WA	NORTH FERNDALE, WA	M0	East	12.5147	1.796	28,408
						West	9.1149	1.796	20,691
	108.196	111.810	NORTH FERNDALE, WA	CUSTER, WA	M0	East	12.5147	3.614	57,164
						West	9.1149	3.614	41,635
	111.810	115.056	CUSTER, WA	SOUTH SWIFT, WA	M0	East	10.1038	3.246	41,452
						West	7.4481	3.246	30,557
	115.056	116.787	SOUTH SWIFT, WA	NORTH SWIFT, WA	M0	East	9.8286	1.731	21,503
						West	7.2582	1.731	15,880
	116.787	119.594	NORTH SWIFT, WA	BLAINE, WA	M0	East	9.8031	2.807	34,779
						West	7.2349	2.807	25,668
399	19.760	25.305	HAMPTON, WA	END STATE, WA	M0	East	0.0261	5.545	183
						West	0.0226	5.545	158
403	98.241	103.362	SKAGIT County, Washington	WEST ACME, WA	M0	East	0.6134	5.121	3,970
						West	0.7563	5.121	4,895
	103.362	111.253	WEST ACME, WA	WEST DEMING, WA	M0	East	0.6136	7.891	6,120
						West	0.7557	7.891	7,537
	111.253	120.850	WEST DEMING, WA	WEST NOOKSACK, WA	M0	East	0.6432	9.597	7,802
						West	0.8058	9.597	9,774
	120.850	127.187	WEST NOOKSACK, WA	END STATE, WA	M0	East	0.6759	6.337	5,414
						West	0.8458	6.337	6,774
418	0.000	5.334	INTALCO, WA	ARCO, WA	M0	East	2.8415	5.334	19,156
						West	2.1103	5.334	14,227
	5.334	5.900	ARCO, WA	ELLIOTT, WA	M0	East	2.7914	0.566	1,997
						West	2.5652	0.566	1,835

	5.900	8.800	ELLIOTT, WA	CHERRY POINT, WA	M0	East	2.7914	2.900	10,231
						West	2.5652	2.900	9,402
614	0.000	5.101	HAMPTON, WA	END STATE, WA	M0	East	0.0226	5.101	146
						West	0.0261	5.101	168

WHATCOM County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **943,193**

Estimated 2008 Main Line Mileage **81.1**

WHATCOM County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		**YARD LOCOMOTIVES*** 4		**TOTAL**
POLLUTANT	EPA Emission Factor	Emissions in Tons/Year	EPA Emission Factor	Emissions in Tons/Year	**Emissions in Tons/Year**
	g/gal		g/gal		
Hydrocarbon	9.6	9.98	9.6	2.12	12.09
Carbon Monoxide	27.4	28.48	27.4	6.04	34.52
Nitrogen Oxides	172.5	179.30	172.5	38.02	217.32
Particulates	6	6.24	6	1.32	7.56
Sulfur Dioxide	16.3	16.94	16.3	3.59	20.53

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

WHITMAN County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
384	25.040	84.036	SPOKANE County, Washington	LATAH County, Idaho	M1	East	0.0000	58.995	0
						West	0.0000	58.995	0

WHITMAN County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **0**

Estimated 2008 Main Line Mileage **59.0**

WHITMAN County

2008 Estimation of BNSF Locomotive Emissions

POLLUTANT	LINE HAUL LOCOMOTIVES EPA Emission Factor g/gal	LINE HAUL LOCOMOTIVES Emissions in Tons/Year	YARD LOCOMOTIVES* 0 EPA Emission Factor g/gal	YARD LOCOMOTIVES* 0 Emissions in Tons/Year	**TOTAL Emissions in Tons/Year**
Hydrocarbon	9.6	0.00	9.6	0.00	0.00
Carbon Monoxide	27.4	0.00	27.4	0.00	0.00
Nitrogen Oxides	172.5	0.00	172.5	0.00	0.00
Particulates	6	0.00	6	0.00	0.00
Sulfur Dioxide	16.3	0.00	16.3	0.00	0.00

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions

YAKIMA County, Washington

ESTIMATION OF FUEL CONSUMPTION FOR LINE HAUL

Locomotive Fuel Rate Per GTM/Gallon: 791.2

Line Segment	From Milepost	To Milepost	From Station	To Station	Track	Direction	Density Million GT	Distance in Miles	Fuel Use in Gallons
48	45.427	52.060	BENTON County, Washington	MABTON, WA	M0	East	4.3801	6.633	36,720
						West	6.3921	6.633	53,588
	52.060	69.420	MABTON, WA	EAST TOPPENISH, WA	M0	East	4.3017	17.360	94,385
						West	6.3099	17.360	138,448
	69.420	72.220	EAST TOPPENISH, WA	WEST TOPPENISH, WA	M0	East	4.3497	2.800	15,393
						West	6.3900	2.800	22,614
	72.220	93.040	WEST TOPPENISH, WA	EAST SELAH, WA	M0	East	4.3240	20.820	113,784
						West	6.3683	20.820	167,578
	93.040	97.430	EAST SELAH, WA	EAST POMONA, WA	M0	East	3.7939	4.390	21,051
						West	5.6872	4.390	31,556
	97.430	99.060	EAST POMONA, WA	WEST POMONA, WA	M0	East	3.7930	1.630	7,814
						West	5.6781	1.630	11,698
	99.060	101.310	WEST POMONA, WA	KITTITAS County, Washington	M0	East	3.7929	2.250	10,786
						West	5.6772	2.250	16,144
49	0.000	1.850	ELLENSBURG, WA	WEST ELLENSBURG, WA	M0	East	3.8105	1.850	8,910
						West	5.6822	1.850	13,286
	1.850	16.260	WEST ELLENSBURG, WA	EAST BRISTOL, WA	M0	East	3.8105	14.410	69,400
						West	5.6822	14.410	103,489
	16.260	17.960	EAST BRISTOL, WA	WEST BRISTOL, WA	M0	East	3.8105	1.700	8,187
						West	5.6824	1.700	12,209
	17.960	23.880	WEST BRISTOL, WA	EAST CLEELUM, WA	M0	East	3.8105	5.920	28,511
						West	5.6828	5.920	42,520
	23.880	26.700	EAST CLEELUM, WA	KITTITAS County, Washington	M0	East	3.7837	2.820	13,486
						West	5.6423	2.820	20,110

YAKIMA County, Washington **Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons** **1,061,668**

Estimated 2008 Main Line Mileage **82.6**

YAKIMA County

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 1		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	11.23	9.6	0.53	11.76
Carbon Monoxide	27.4	32.06	27.4	1.51	33.57
Nitrogen Oxides	172.5	201.82	172.5	9.50	211.32
Particulates	6	7.02	6	0.33	7.35
Sulfur Dioxide	16.3	19.07	16.3	0.90	19.97

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.

Washington	Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons	75,044,206
	Estimated 2008 Main Line Mileage	1,600.5

BNSF Railway Company
2008 Estimation of BNSF Locomotive Emissions For Washington Counties

	Estimated 2008 Line Haul Locomotive Fuel Consumption in Gallons	75,044,206
ALL COUNTIES	Estimated 2008 Main Line Mileage	1,600.5

2008 Estimation of BNSF Locomotive Emissions

	LINE HAUL LOCOMOTIVES		YARD LOCOMOTIVES* 79		TOTAL
POLLUTANT	EPA Emission Factor g/gal	Emissions in Tons/Year	EPA Emission Factor g/gal	Emissions in Tons/Year	**Emissions in Tons/Year**
Hydrocarbon	9.6	793.91	9.6	41.79	835.70
Carbon Monoxide	27.4	2265.94	27.4	119.27	2385.21
Nitrogen Oxides	172.5	14265.53	172.5	750.88	15016.40
Particulates	6	496.19	6	26.12	522.31
Sulfur Dioxide	16.3	1347.99	16.3	70.95	1418.94

*The BNSF estimates the average BNSF yard locomotive consumes 50,000 gallons fuel per year.
The BNSF estimate is based on a 2003 BNSF yard locomotive fuel consumption study.
The "EPA Emission Factor" data used in estimating the emissions is from EPA420-F-97-051, Table 9.
The SOx Emission Factor is based on sulphur content of fuel purchased per BNSF fuel specifications.